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JAN 23 2004

OFFICE OF PETITIONS

IN THE UNITED STATES PATENT OFFICE

PATENT APPLICATION

Ammicht-Davis-Shively

CASE 5-3-15

TITLE Improved Coefficient Computation in Image Compression Using Set Partitioning in Hierarchical Trees

APPLICATION NO. 09/872,810

THE COMMISSIONER FOR PATENTS

P. O. BOX 1430

ALEXANDRIA VA, 22310-1450

PETITION TO REVIVE ABANDONED APPLICATION

A. PETITION TO REVIVE UNDER 37 CFR 1.137(a) ON GROUNDS OF UNAVOIDABLE DELAY

1. Applicants filed the captioned case no. 09/872,810 on 06/04/2001 and on 07/31/01 received a Notice to File Missing Parts (Exhibit "A").
2. Applicants timely responded to said 07/31/01 Notice by filing of Declarations for each inventor.
3. Applicants had earlier instructed their Draftsman to commence work on formal drawings (Exhibit "B")
4. Almost two (2) years then passed without applicants receiving any communication from the USPO.
5. Concerned that the application had been lost, or otherwise removed from usual handling,, or alternatively that applicants had not received one or more communications duly issued from the USPO, Applicants wrote a Status Request letter dated 07/28/2003 (Exhibit "C").
6. More months passed without any communication from the USPO and without specifically a reply to the Status Request letter.
7. The posting of the letter of July 28, 2003 was intended to bring certitude to the application process that had been cast into uncertainty by the lack of communication from the USPO.
8. The letter of July 28, 2003 therefore maintained the application in an active status and hence not subject to a holding of abandonment at least until said Status Request letter was acted on by the USPO.
9. Said letter was never acted upon by the USPO.
10. A Notice of Abandonment dated 11/24/2003 (Exhibit "D") was issued and received by applicants.


11. The Notice of Abandonment made reference to the Exhibit "A" 07/31/01 Notice to File Missing Parts but made no reference to the Exhibit "C" Status Inquiry letter of July 28, 2003.

12. The delay in responding to all requirements of the 07/31/01 Notice was made unavoidable by the lack of response by the USPO to applicants' letter of July 28, 2003.

13. Formal drawings are submitted concurrently with this Petition.

14. Wherefore applicants respectfully request the Commissioner to grant a Petition to Revive under 37 1.137(a) on grounds of unavoidability.

Submitted (with Exhibits) by:


Charles E. Graves
Attorney for Applicants

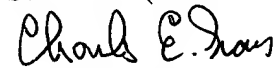
Reg. No. 22963

January 13, 2004

B. PETITION TO REVIVE UNDER 37 CFR 1.137(b) ON GROUNDS OF UNINTENTIONAL DELAY

1. Applicants filed the captioned case no. 09/872,810 on 06/04/2001 and on 07/31/01 received a Notice to File Missing Parts (Exhibit "A").
2. Applicants timely responded to said 07/31/01 Notice by filing of Declarations for each inventor.
3. Applicants had earlier instructed their Draftsman to commence work on formal drawings (Exhibit "B")
4. Concurrent with the activity in the captioned case, Applicants were prosecuting utility application 09/429,467 filed on 10/28/1999; and had earlier filed provisional application 60/208,141 on 05/31/2000.
5. The instant case 09/872,810 is a continuation-in-part of parent application no. 09/429,467 and also is based in part on provisional application 60/208,141
6. Almost two (2) years passed from the date of receiving the Notice to File Missing Parts, without applicants receiving any communication from the USPO.
7. Concerned that the application had been lost, or otherwise removed from usual handling,, or alternatively that applicants had not received one or more communications duly issued from the USPO, Applicants wrote a Status Request letter dated 07/28/2003 (Exhibit "C").
8. In parent application no. 09/429,467, in response to a NOTICE OF DRAFTERPERSON'S PATENT DRAWING REVIEW dated 02/02/2000, applicants had filed formal drawings with the USPO under cover letter logged with date 11/19/2002 (Exhibit "E").
9. At the time of drafting Status Request letter Exhibit "C", Applicants' attorney reviewed the responses to the Notices to File Missing Parts; and on examining Exhibit "E" erroneously concluded that the formal drawings in the instant case were already submitted.
10. The error was inadvertent.
11. A Notice of Abandonment dated 11/24/2003 (Exhibit "D") was issued and received by applicants on or about December 2, 2003.
12. Formal drawings are submitted concurrently with this Petition.
13. Wherefore in the alternative, Applicants ask that the petition to revive under 37 1.137(b) be Granted

Submitted (with Exhibits) by:


Charles E. Graves
Attorney for Applicants

Reg. No. 22963

January 13, 2004

CERTIFICATE OF MAILING

The undersigned hereby certifies that in connection with the captioned application he placed in the US mail a Response to NOTICE OF ABANDONMENT; and PETITION TO REVIVE on the date below:

Date: January 14th 2003

Charles E. Graves

Signature: Charles E. Graves

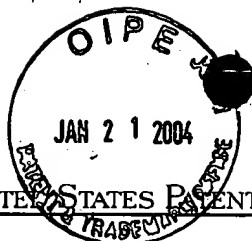


EXHIBIT "A"

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/872,810	06/04/2001	Ammicht	5-3-15

JAN 23 2004

CONFIRMATION NO. 3427

Charles E. Graves Associates, P.C.
6818 Oasis Pass, Suite 100
Austin, TX 78732

OFFICE OF PETITIONS

FORMALITIES LETTER



OC00000006367478

Date Mailed: 07/31/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- o The oath or declaration is missing.

A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- o Substitute drawings in compliance with 37 CFR 1.84 because:
 - drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch);

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY



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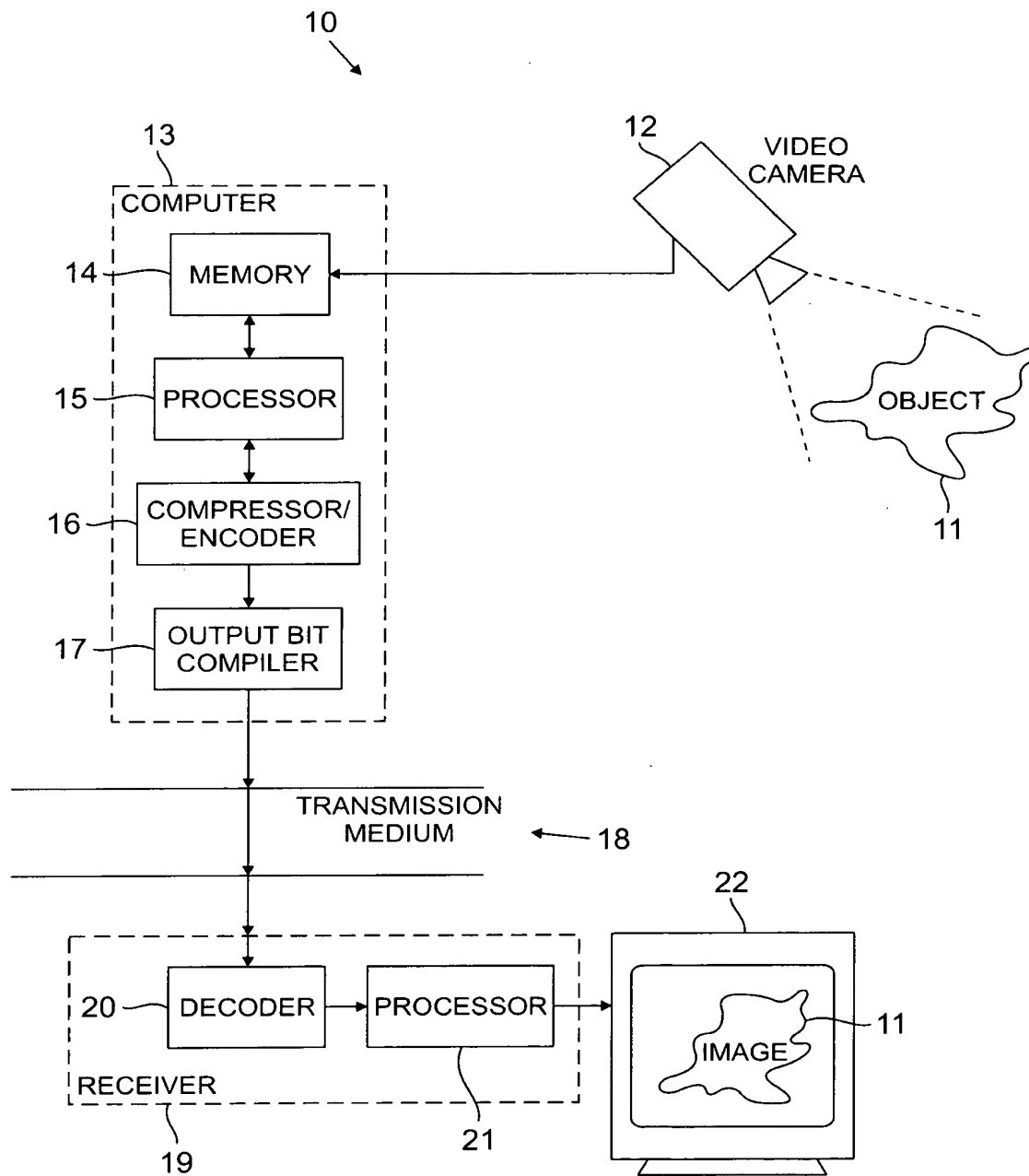


FIG. 1



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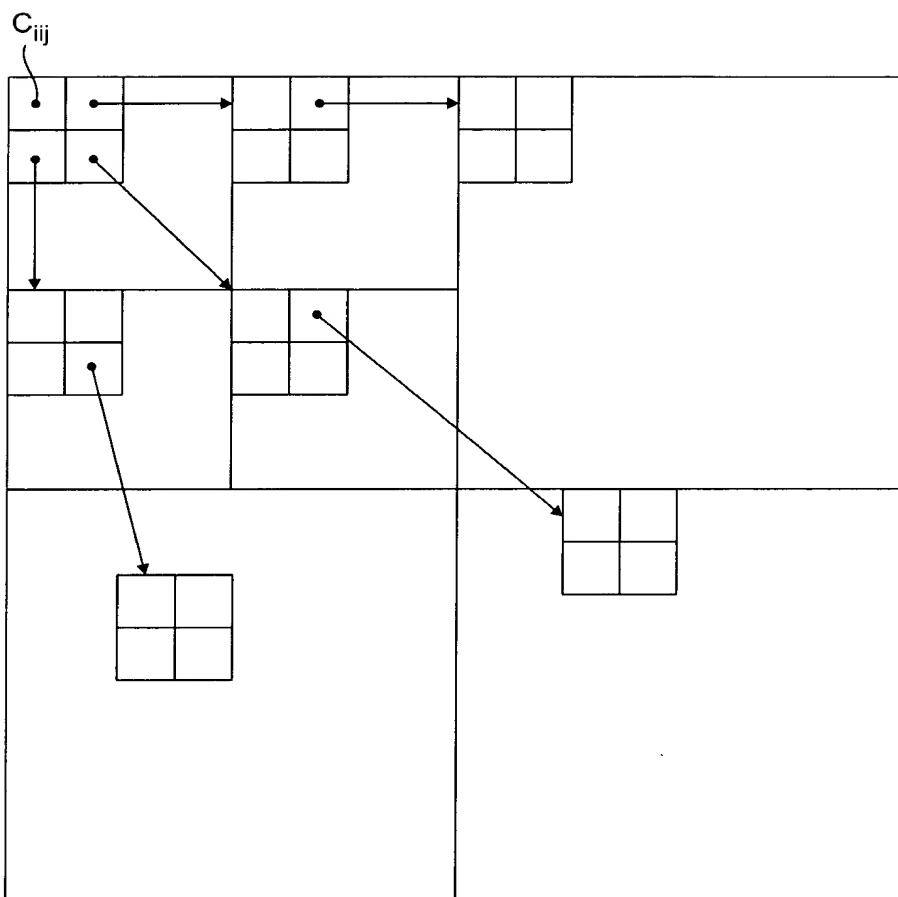


FIG. 2



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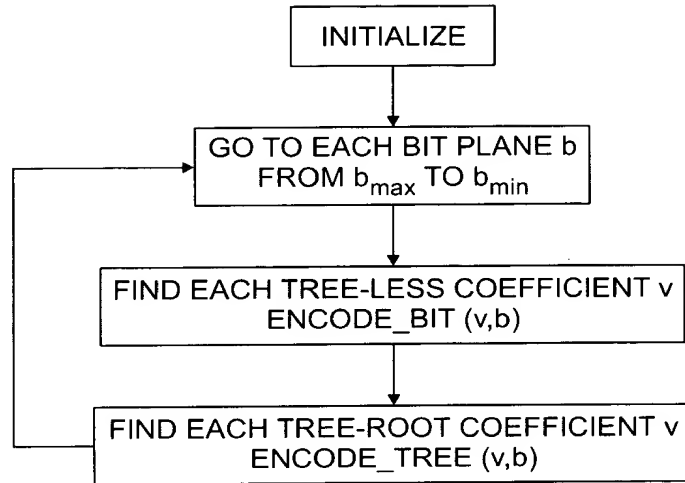


FIG. 3a

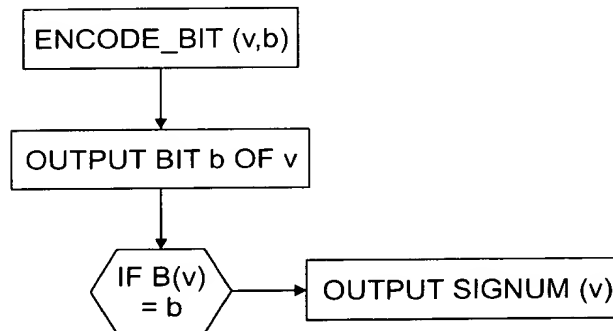


FIG. 3b



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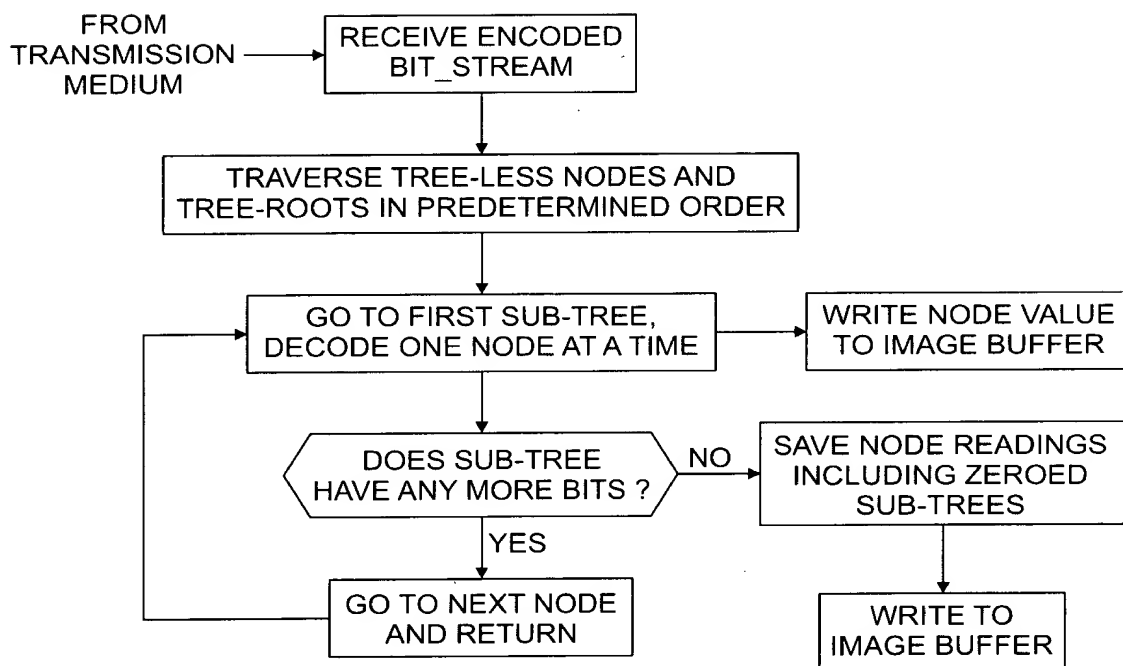
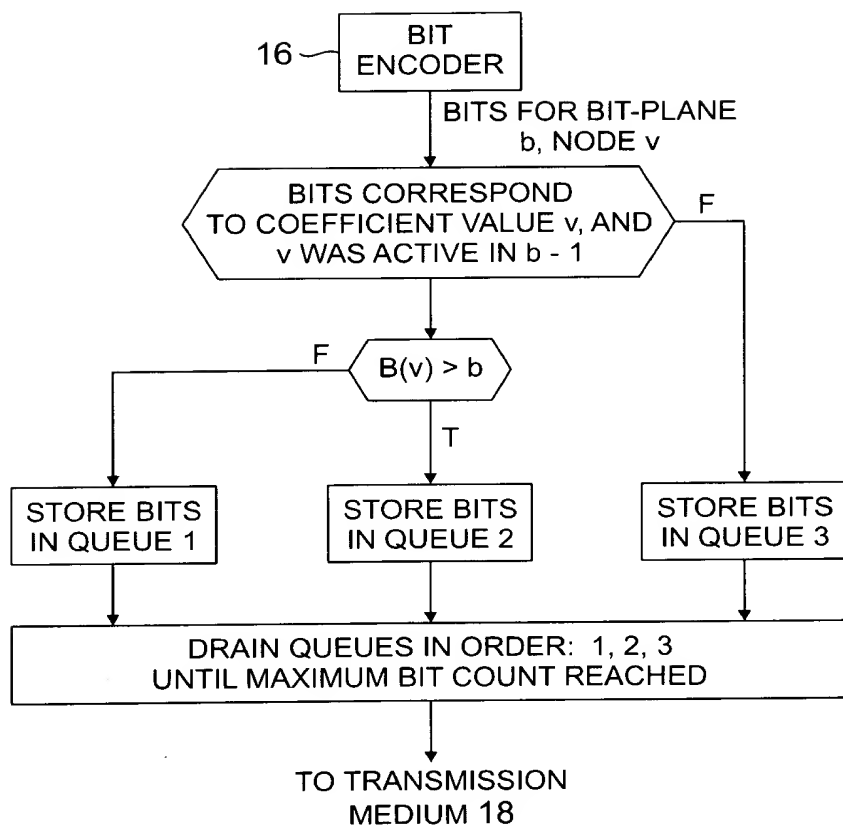


FIG. 4

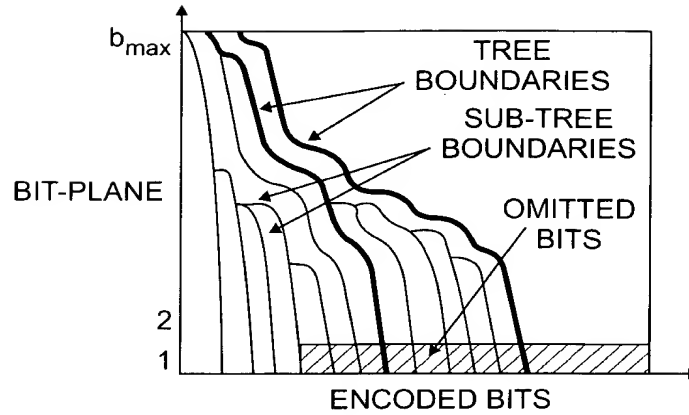


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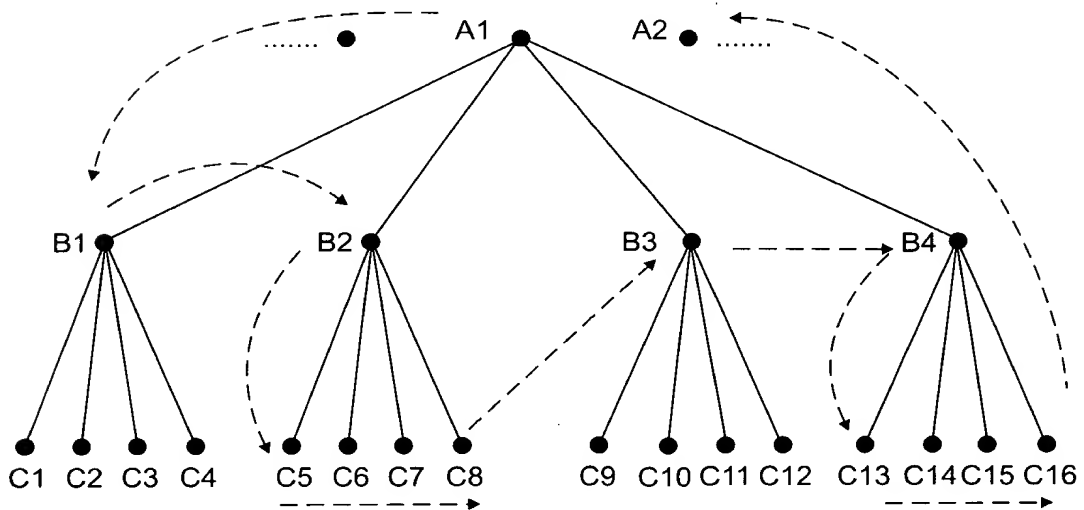
POST PROCESSOR BIT RE-ORDERING

FIG. 5



THE ORIGINATING NODE OF BITS IN THE ENCODER
 BIT-STREAM OUTPUT AS A FUNCTION OF BIT-PLANE
 AND BIT NUMBER FOR THE REFERENCE

FIG. 6



TRAVERSE BY "SIBLINGS FIRST, THEN SUB-TREES"

FIG. 7

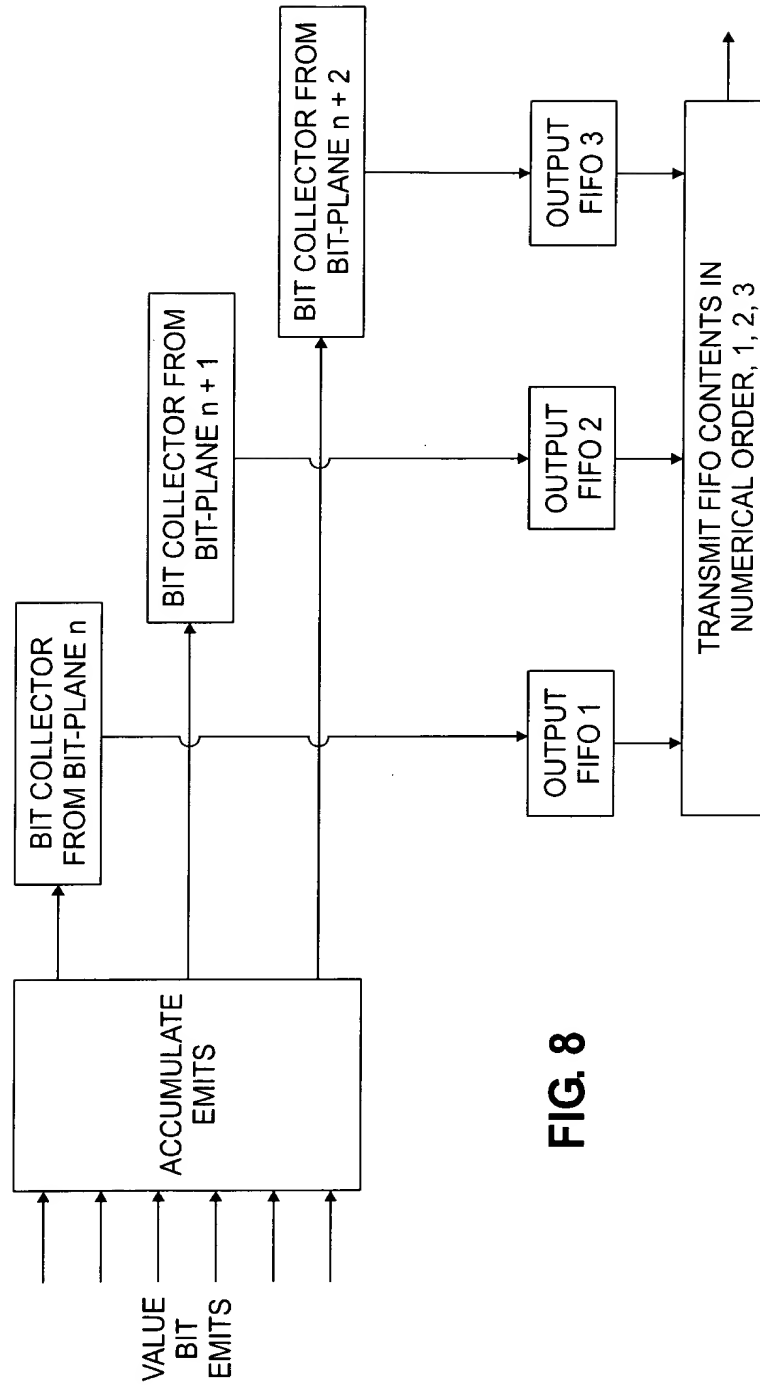


FIG. 8



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	BOTH	756 x 512	1920 x 1088	
AVERAGE DIFFERENCE	0.38	0.55	0.34	DB
STD DEVIATION	0.17	0.09	0.16	DB
MAX	0.72	0.72	0.62	DB
MIN	0.01	0.46	0.01	DB

COMPARISON OF PSNR VALUES ACHIEVED BY THE
SPIHT AND LIFTS REFERENCE ALGORITHMS

FIG. 9

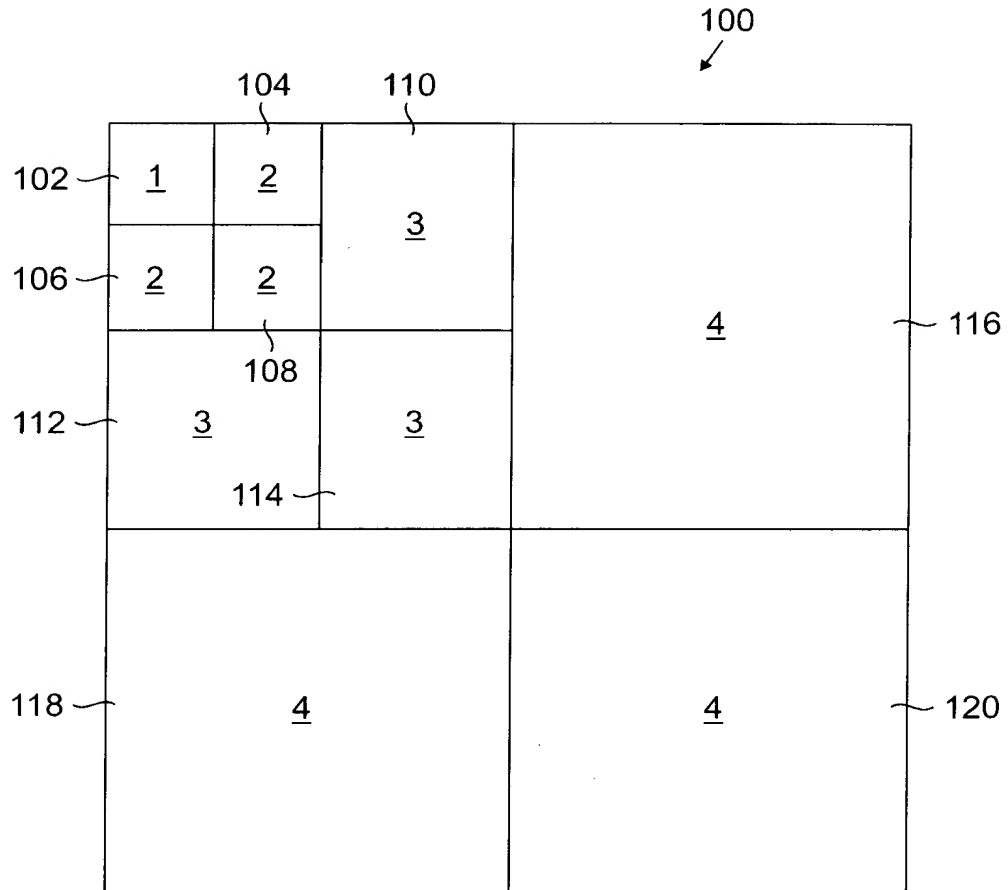


FIG. 10

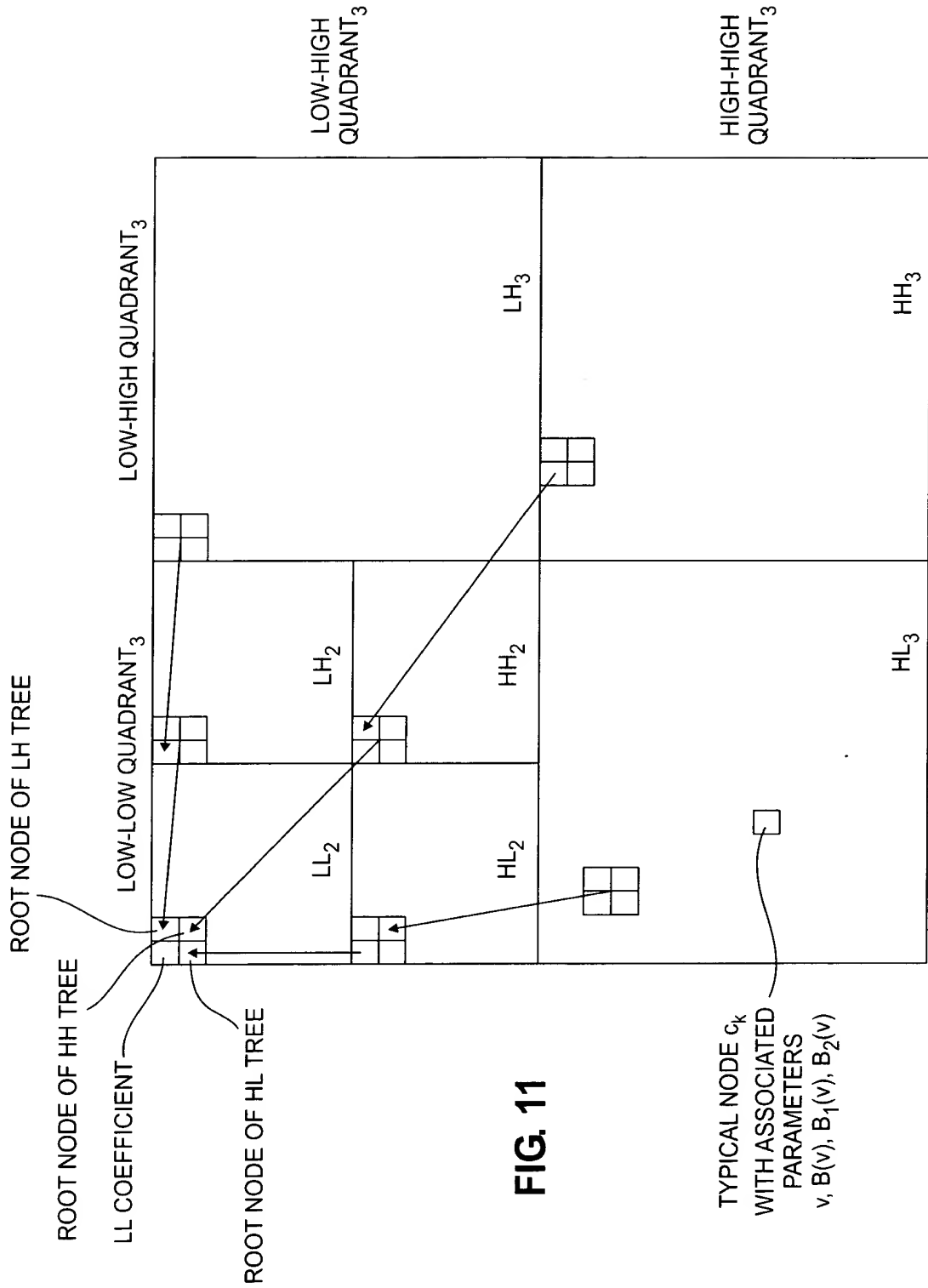


FIG. 11



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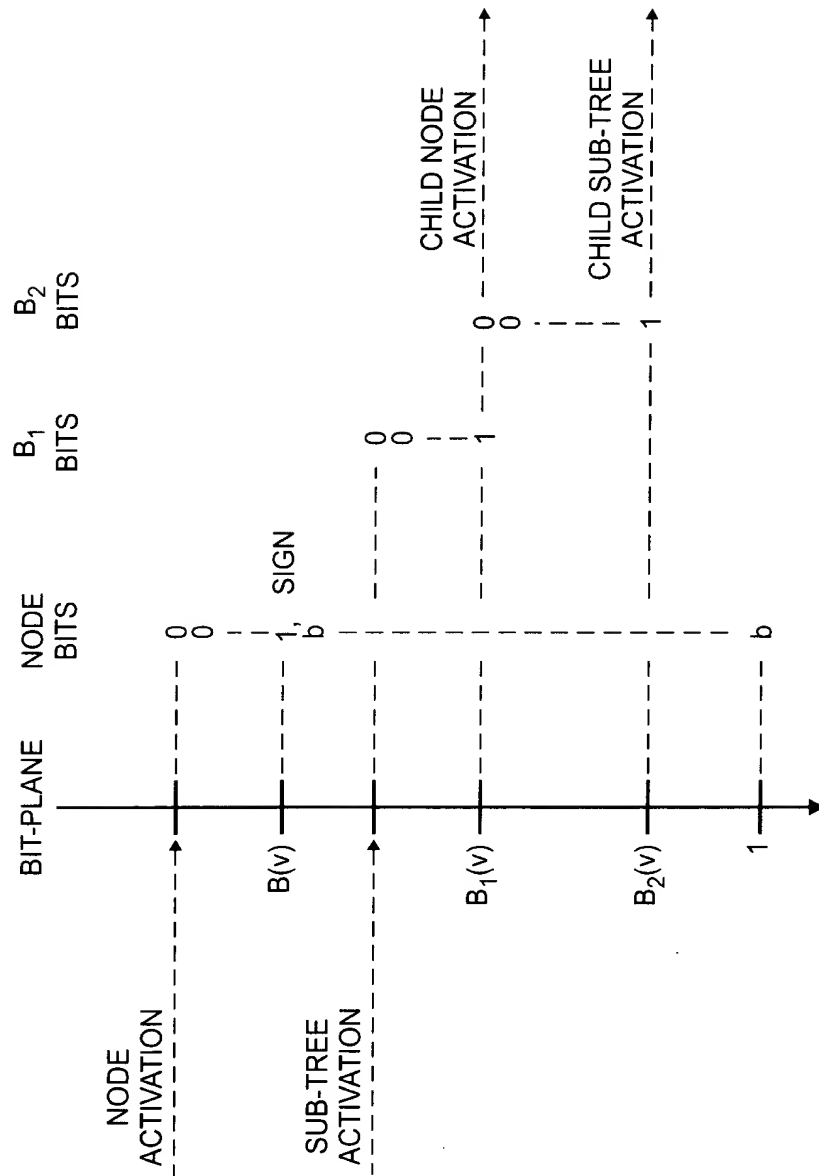


FIG. 12



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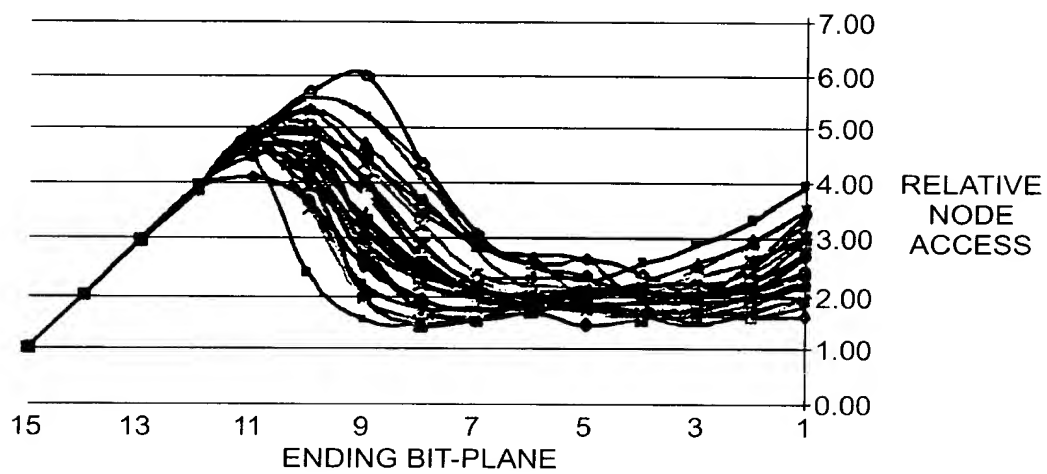


FIG. 13

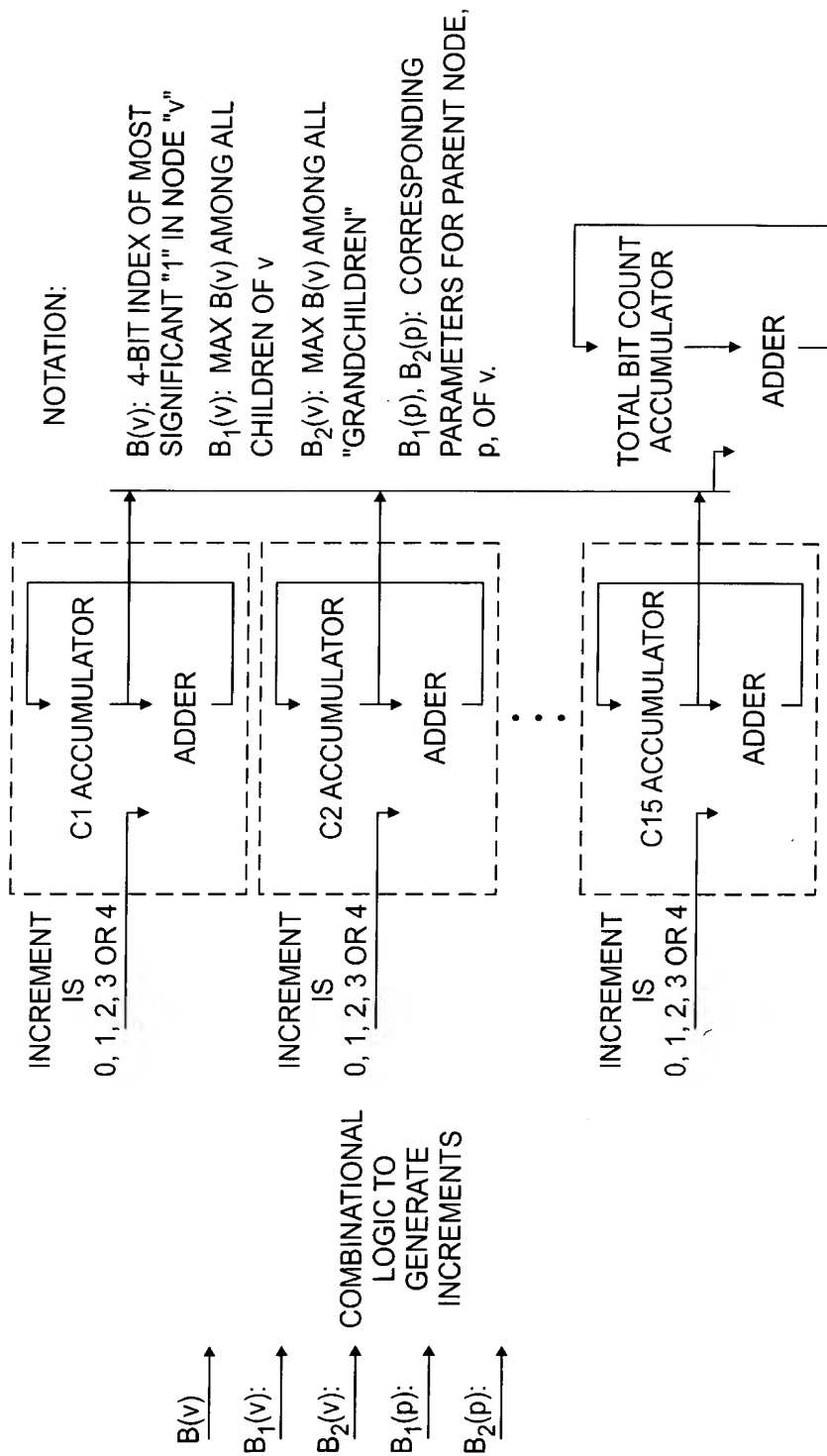
FIG. 14 is a block diagram illustrating a generic coefficient 4-tuple processing system. The system takes four input coefficients, V_1 , V_2 , V_3 , and V_4 , and processes them to produce a final output $B_1(V_{PARENT})$ and $B_2(V_{PARENT})$.

The inputs V_1 through V_4 are each fed into a corresponding block labeled $B_1(V_i)$ (where $i=1, 2, 3, 4$). The outputs of these blocks are then fed into a block labeled "MSD" (Most Significant Digit). The outputs of the "MSD" blocks are then fed into a block labeled "MAX SELECTOR".

The outputs of the "MAX SELECTOR" blocks are then fed into a final block labeled $B_1(V_{PARENT})$ and $B_2(V_{PARENT})$.

A legend at the bottom of the diagram defines the terms used:

- "MSD" = MOST SIGNIFICANT DIGIT INDEX ENCODER (4 BITS)



(AFTER WAVELET TRANSFORM IS COMPLETED, C_k) ACCUMULATORS ARE ADDED TO "TOTAL BIT COUNT ACCUMULATOR" SEQUENTIALLY UNTIL TOTAL EXCEEDS BUDGETED THRESHOLD. THAT IDENTIFIES LAST BIT PLANE)

LOGIC TO HISTOGRAM AND THRESHOLD BIT COUNTS BY BIT PLANE

FIG. 15



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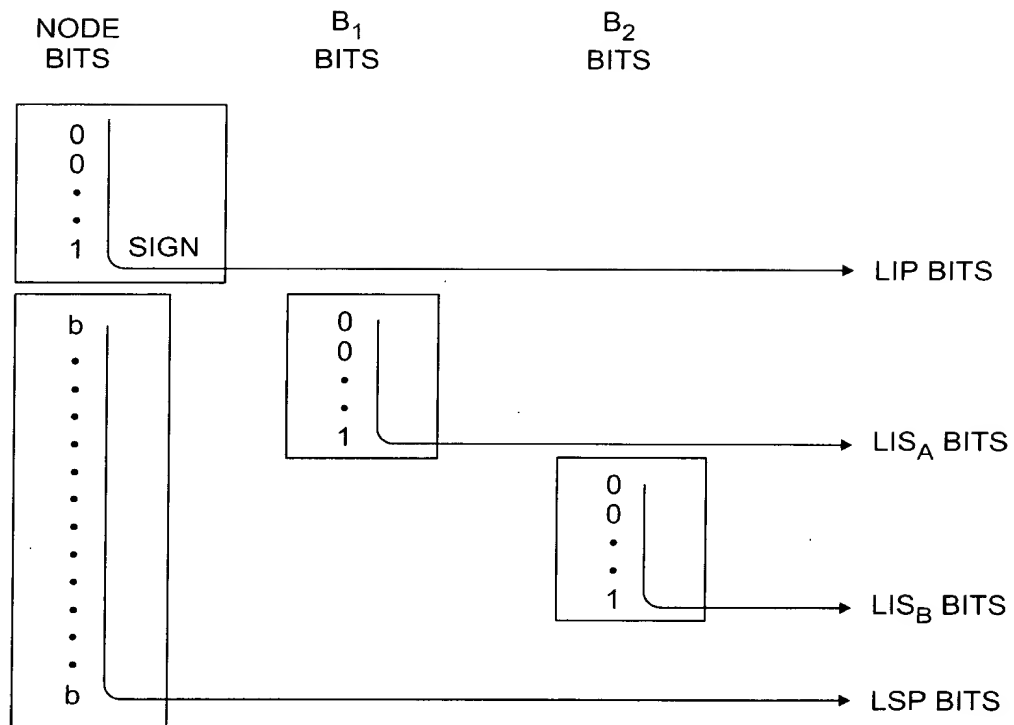


FIG. 16

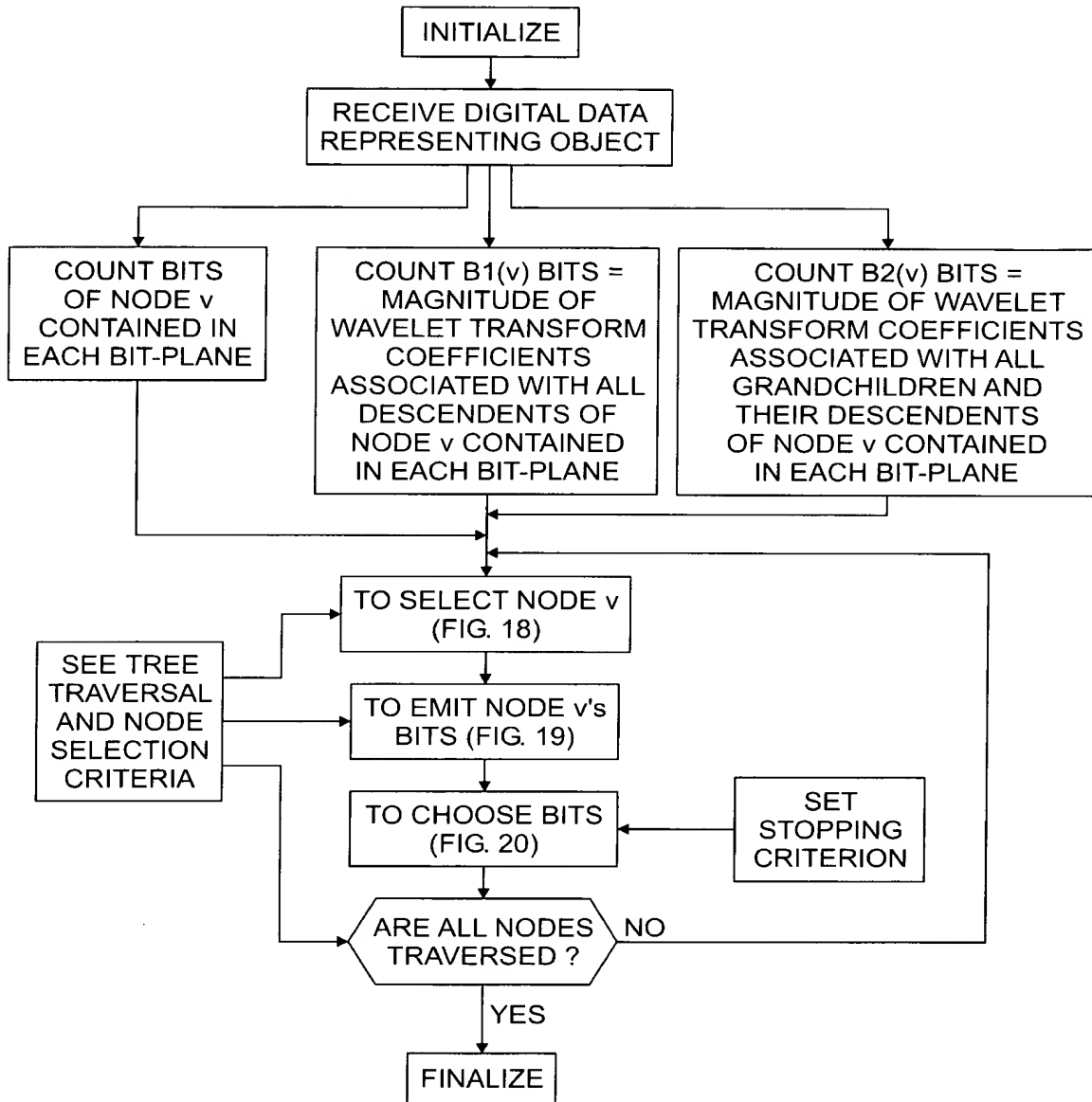


FIG. 17



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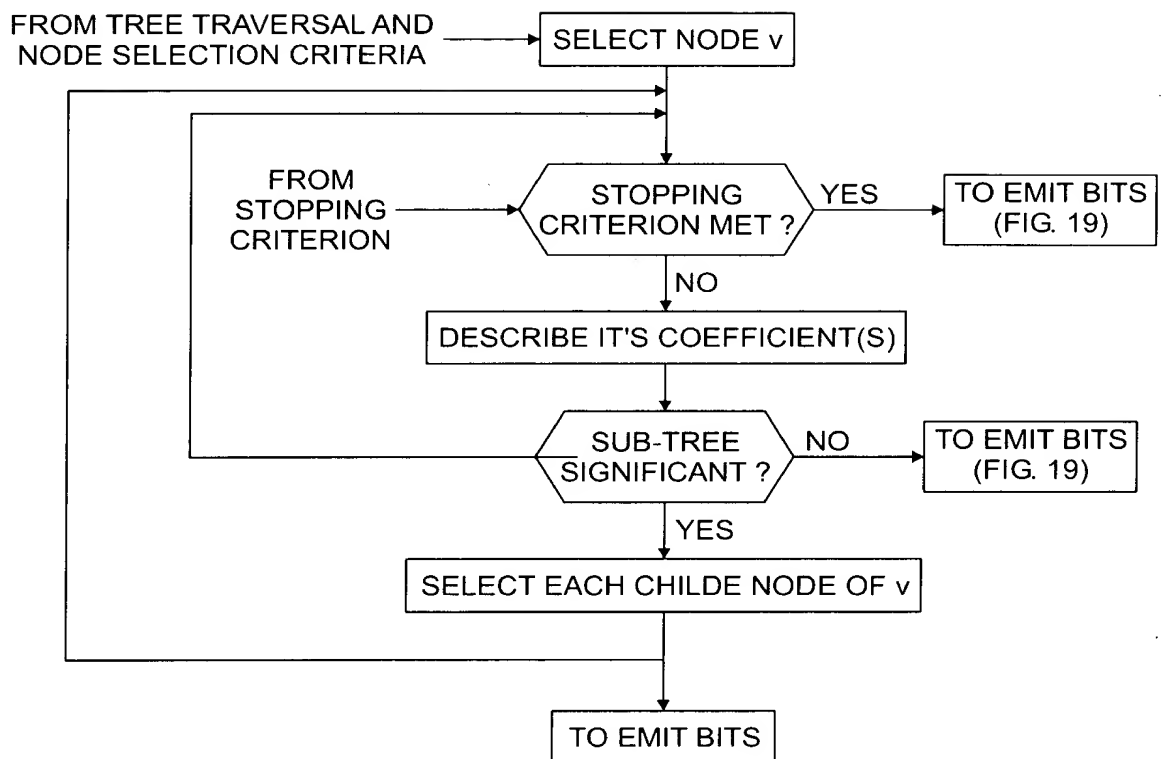


FIG. 18

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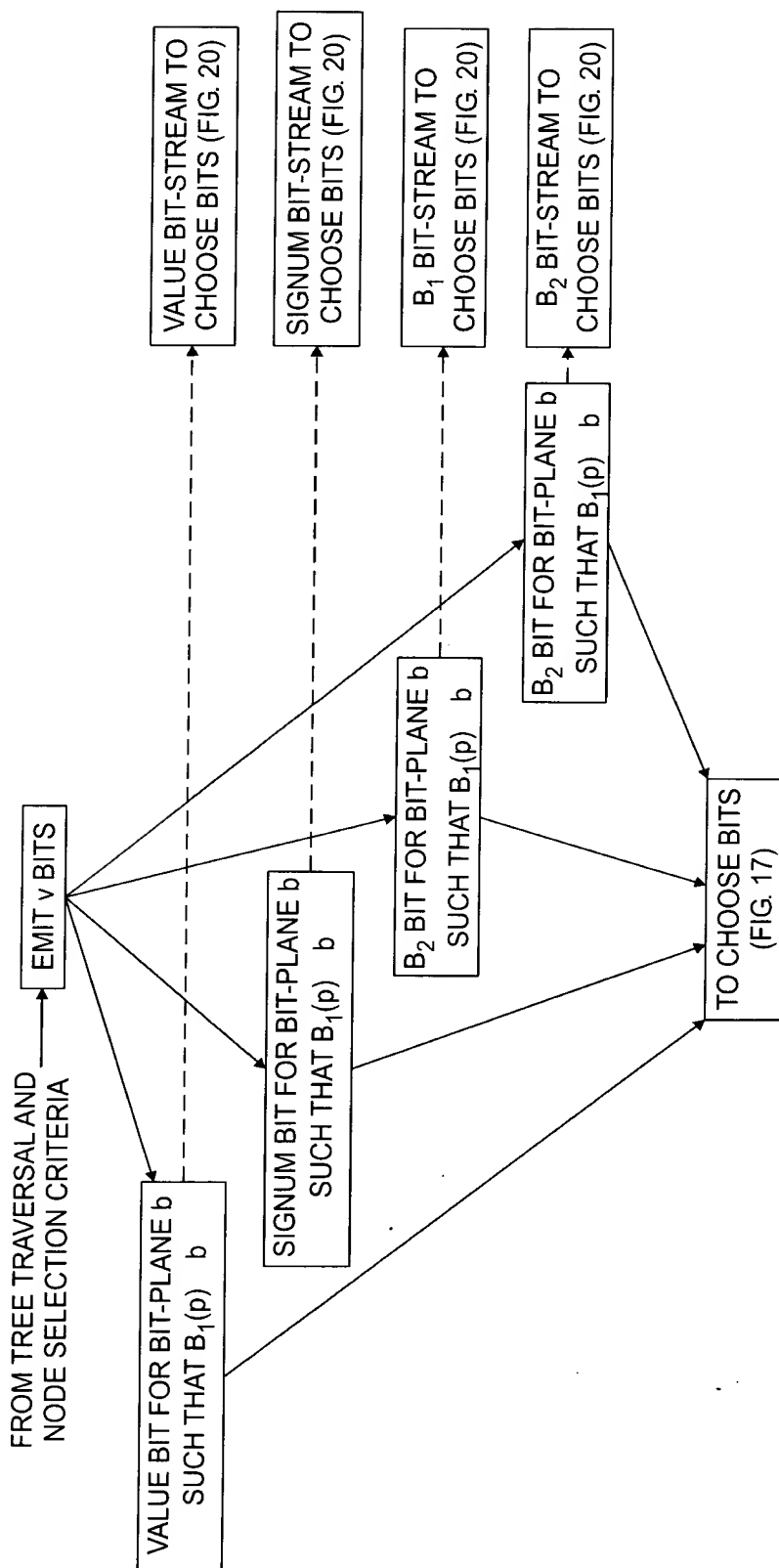


FIG. 19

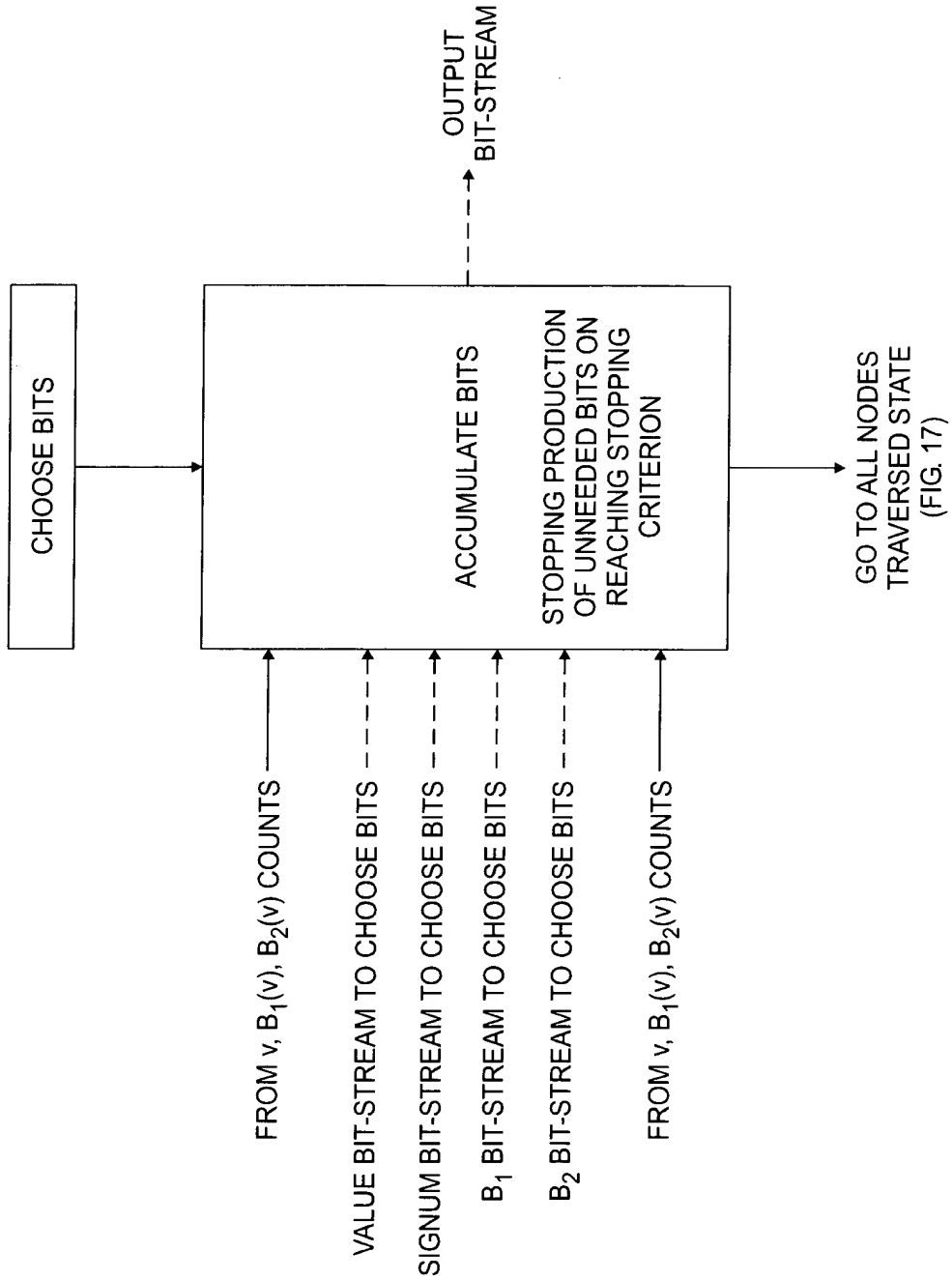


FIG. 20



EXHIBIT "C"

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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

JAN 23 2004

OFFICE OF PETITIONS

PATENT APPLICATION

Ammicht-Davis-Shively

CASE 5-3-15

TITLE Improved Coefficient Computation in Image Compression
Using Set Partitioning in Hierarchical Trees

APPLICATION NO. 09/872,810

THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D. C. 20231

SIR:

Re: Status Request

As this patent application has been pending for more than 2 years without an Office Action, and with no correspondence from USPTO since 07/31/2001, it is respectfully requested that the USPTO advise the undersigned attorney for Applicants as to the application's status.

Respectfully,

lceal

Charles E. Graves Reg. No. 22963
Attorney for Applicants

July 28, 2003

Please address all correspondence to:

Charles E. Graves Associates, P. C.
6818 Oasis Pass, Suite 100
Austin TX, 78732

tel.: 512-266-2696
email: jgraves@austin.rr.com



EXHIBIT "D"

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/872,810	06/04/2001	Ammicht	5-3-15

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JAN 23 2004

OFFICE OF PETITIONS

Charles E. Graves Associates, P.C.
 6818 Oasis Pass, Suite 100
 Austin, TX 78732

CONFIRMATION NO. 3427

ABANDONMENT/TERMINATION
 LETTER



OC000000011343141

Date Mailed: 11/24/2003

NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 07/31/2001.

- No reply was received.

A petition to the Commissioner under 37 CFR 1.137 may be filed requesting that the application be revived.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(l); and (4) a terminal disclaimer if required by 37 CFR 1.137(d).

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL DELAY** must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d).

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (703) 305-9282. Petitions should be mailed to: Mail Stop Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY

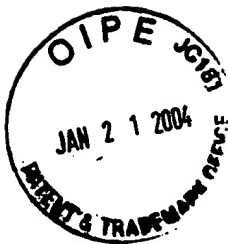


EXHIBIT "E"

11-19-02

PATENT AND TRADEMARK OFFICE

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JAN 23 2004

OFFICE OF PETITIONS

PATENT APPLICATION

Ammicht - Davis - Shively

CASE 4-2-15 FILED : October 28, 1999 GROUP ART UNIT 2721

Ser. No. 09/429,467

TITLE Improved Image Compression Using Set Partitioning in Hierarchical Trees

THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D. C. 20231
ATTENTION: DRAWING PROCESSING BRANCH

SIR:

Please find enclosed:

ONE (1) SET OF FORMAL DRAWINGS to be filed in the captioned case, as required by the NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW dated 02/02/2000.

Please direct any correspondence or calls to Applicants' attorney at the below address.

By: Attorney for Applicants

Charles E. Graves Reg. No. 22963
6818 Oasis Pass Ste. 100
Austin TX 78732
512-266-2606
jgraves@austin.rr.com

enc.: eight (8) sheets of Formal Drawings
copy of "NOTICE"

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.